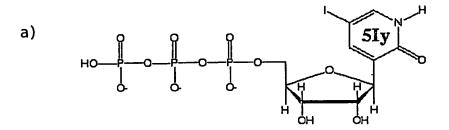
c)

d)

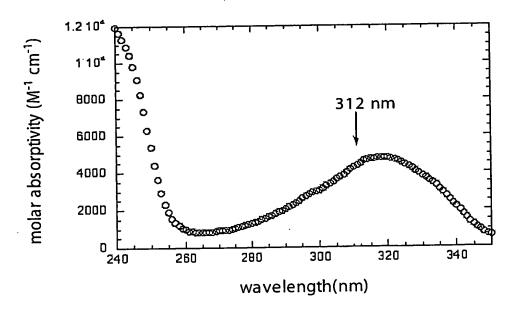
Figure 3

bis(dimethylamino)naphthalene,(CH3O)3PO,0°C,2h. (2)(n-Bu3NH)2P2O,,0°C,10min. (c)(1)POCl₃,(CH₃O)₃PO,0°C,2h. (2)(n-Bu₃NH)₂P₂O,0°C,10min. (d)(1)POCl₃,1,8-(a)I2,KI,Na2CO3,100°C,4h. (b)CF3CONHCH2CCH,Pd(Ph3P)4,Cul,Et3N,DMF,rt,4-6h. (3)conc.NH4OH,rt,10h.

Figure 4

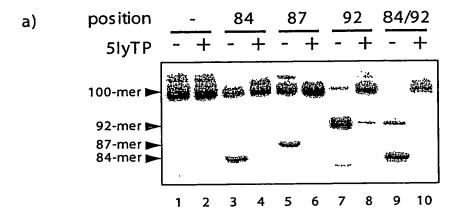


b)



a) 5'-end primer; 39-mer 39.45 : 5'-GGTAATACGACTCACTATAGGGAGTGGAGGAATTCATCG 3'-end primer; 29-mer 29.45 :5'-GCAGAAGCTTGCTGTCGCTAAGGCATATG 29.45s84 :5'-GCAGAAGCTTGCTGTCsCTAAGGCATATG 29.45s87 :5'-GCAGAAGCTTGCTsTCGCTAAGGCATATG 29. 45s92 :5'-GCAGAAGCsTGCTGTCGCTAAGGCATATG 29.45s84/92 :5'-GCAGAAGCSTGCTGTCSCTAAGGCATATG b) 5′**-**GGGAGUGGAG GAAUUCAUCG AGGCAUAUGU CGACUCCGUC UUCCUUCAAA CCAGUUAUAA AUUGGUUUUA GCAUAUGCCU UAGCGACAGC AAGCUUCUGC

Figure 6



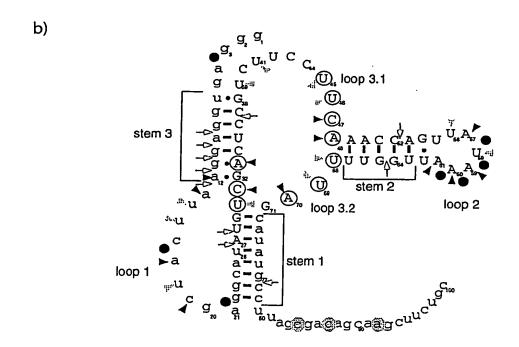


Figure 7

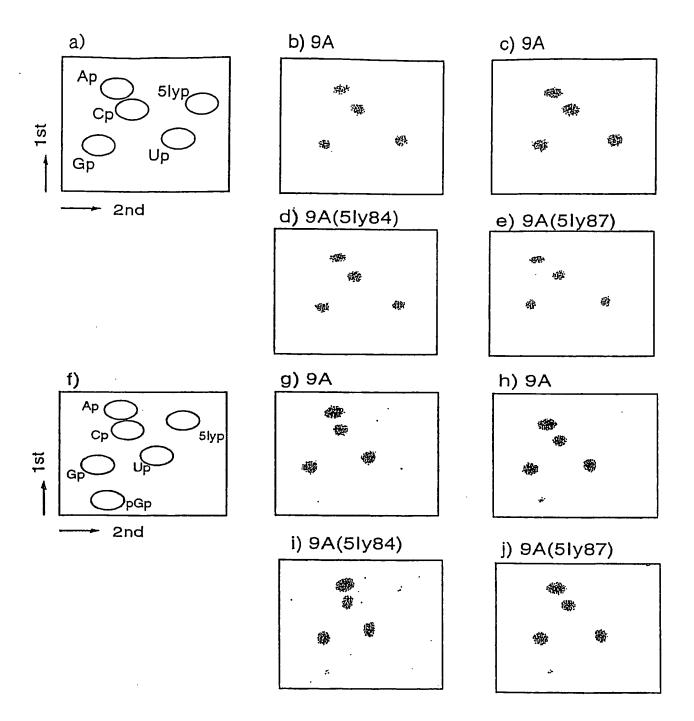


Figure 8

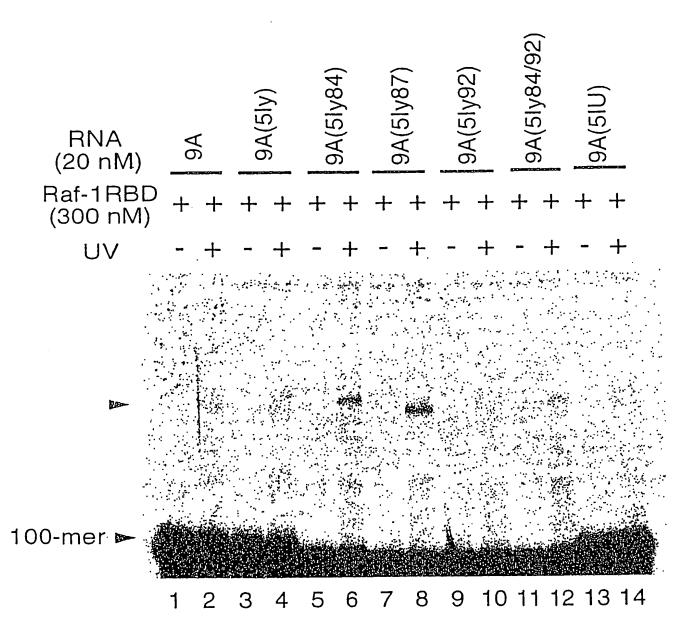
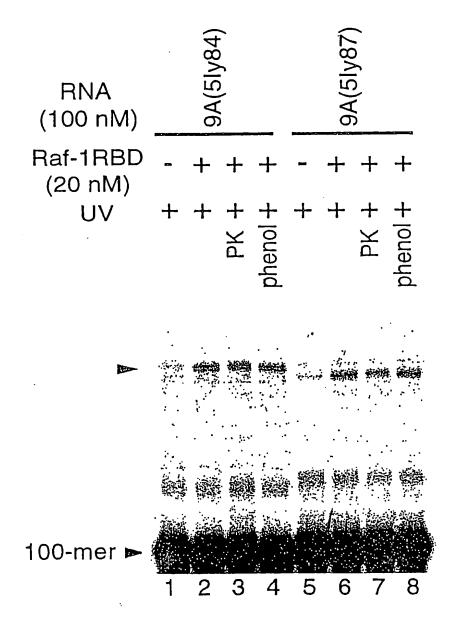
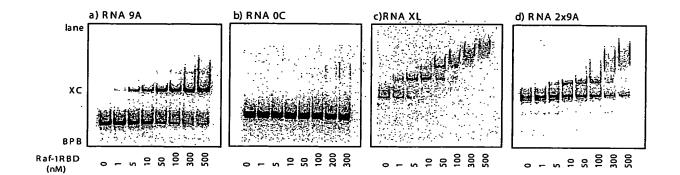


Figure 9





e) RNA 9A :100-mer

 $\verb| 5'-GGGAGUGGAGGAAUUCAUCGAGGCAU[-N45-]| CAUAUGCCUUAGCGACAGCAAGCUUCUGC-3'| \\$

AUGUCGACUCCGUCUUCCAAACCAGUUAUAAAUUGGUUUUAG

RNA 9A(5ly87):100-mer

RNA 2x9A:200-mer

-GGGAGUGGAGGAAUUCAUCGAGGCAU [-N45-] CAUAUGCCUUAGCGACAGCUUCUGC-3'

RNA 0C:100-mer

 $\verb| 5'-GGGAGUGGAGGAAUUCAUCGAGGCAU[-N45-] CAUAUGCCUUAGCGACAGCAAGCUUCUGC-3'| \\$

CUGGGAACCCUAUCUUGCUUUUGGUAGCUGUAUUCACCUGUAACAG

RNA XL: cross-linking product generated from two molecules of 9A(5ly87)

Figure 11

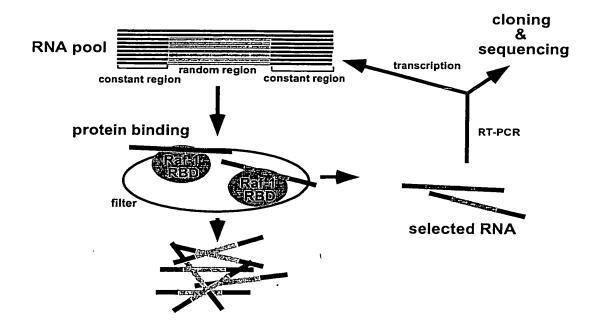


Figure 12

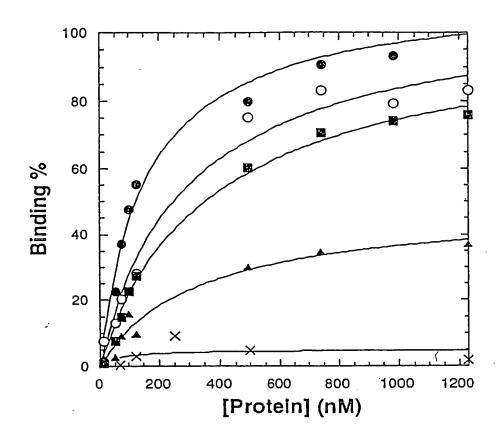
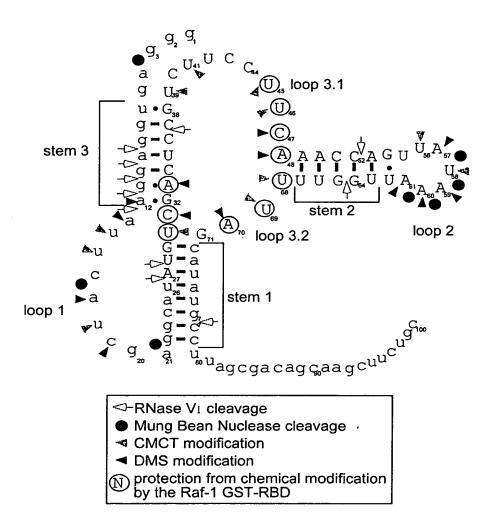
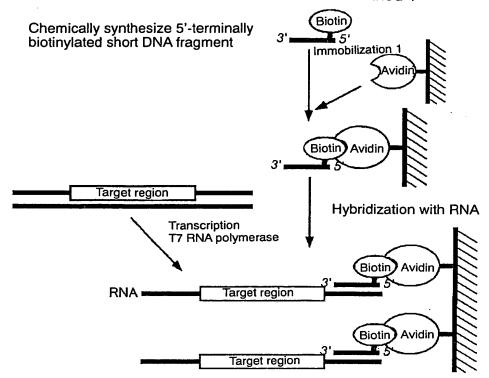


Figure 13



Conventional Method 1



Conventional Method 2

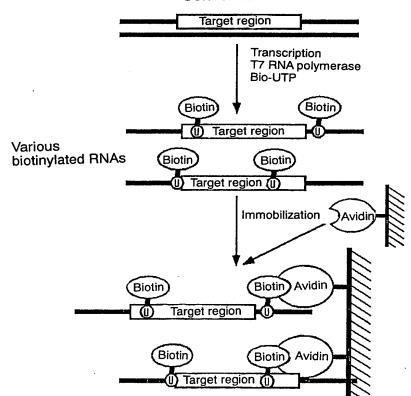


Figure 14 (Continued)

Inventive Method based on artificial base pairing

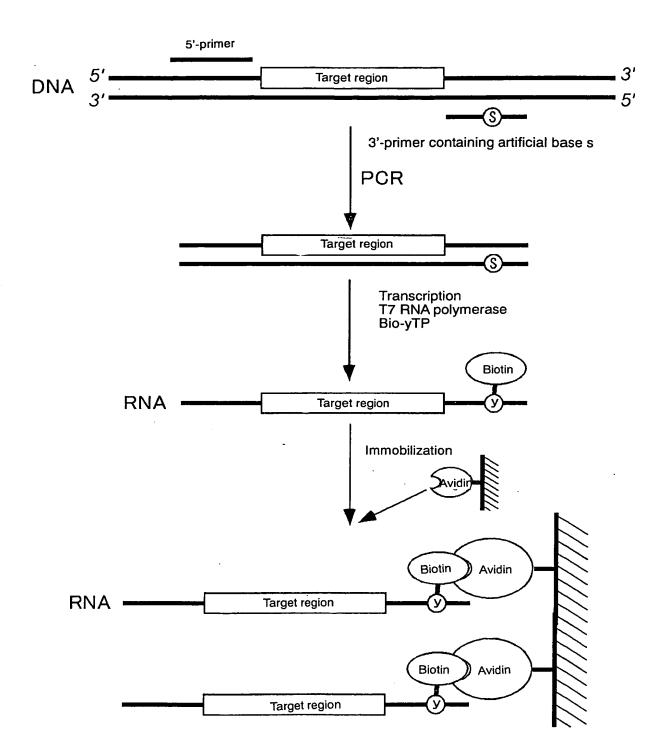
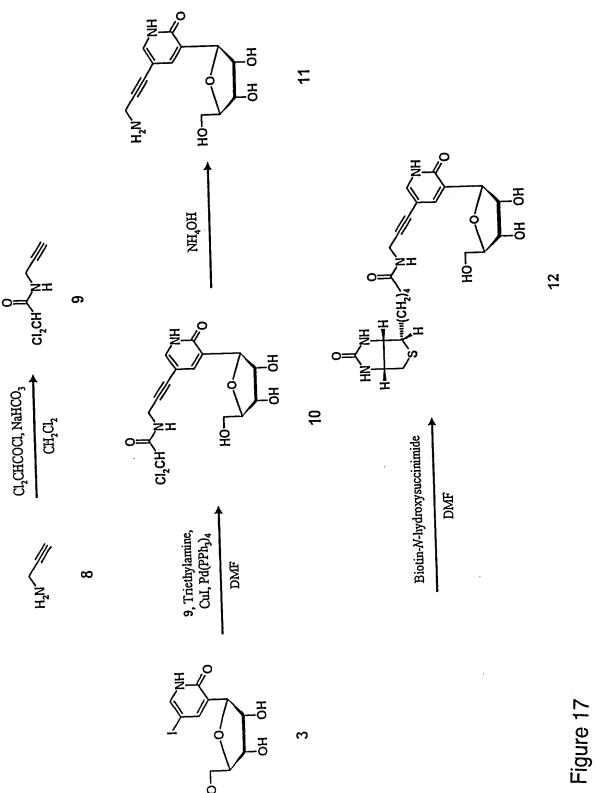


Figure 1

Figure 1



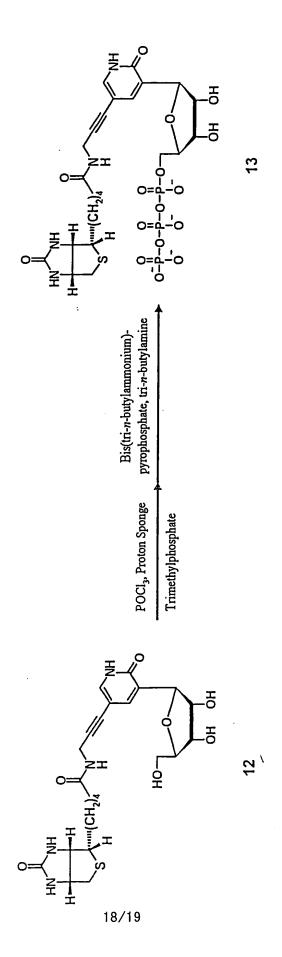
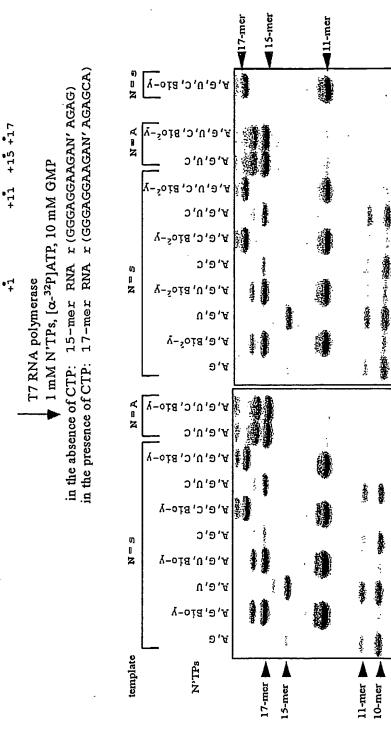


Figure 18

template strand (temp35s or temp35A):3'-d(TATTATGCTGAGTGATATCCCTCCTTCTNTCTCGT) N = s or A 5'-d (ATAATCGACTCTACTATAGGGAGGAAGA) non-template strand (T7prim28N):



► RNA containing only normal nucleotides ≪RNA containing normal nucleotides and Bio-y or Bio²-y

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18 19

17

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Figure 19